WHAT IS CLAIMED IS:

1. A system for performing a scan of a portion of a specimen surface, comprising:

a low coherence light energy generating device;

a collimator for collimating light energy received from said low coherence light energy generating device;

a diffraction grating for receiving light energy transmitted from said collimator and passing nonzero order light energy toward said specimen;

a reflective surface for receiving predetermined order light energy from said diffraction grating;

a second diffraction grating for receiving light reflected from said specimen and from said reflective surface;

a collimator for receiving light energy from said second diffraction grating; and

a camera for receiving light energy from the receiving collimator;

wherein said first diffraction grating passes light energy only over a portion of the specimen surface having predetermined standardized characteristics, said portion comprising less than half of the specimen surface.

2. The system of claim 1, wherein said predetermined order light energy is first order light energy.

3. The system of claim 2, wherein said reflective surface receives nonzero order light energy passed from said diffraction grating.

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4. The system of claim 2, further comprising a blocking element for blocking passage of zero order light energy received from said diffraction grating.

5. The system of claim 1, wherein the camera converts an elliptical image of said portion of said specimen into an image having an aspect ratio closer to 1:1.

6. The system of claim 1, wherein each receiving collimator comprises at least one lens.

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7. The system of claim 2, wherein nonzero order light energy passes from said diffraction grating toward said reflective surface and said specimen.

8. The system of claim 2, wherein said first diffraction grating is optimized for zero intensity of its zero order.

9. The system of claim 2, further comprising means for rotating said specimen surface to expose alternate portions of said surface to said light energy.

10. The system of claim 1, wherein said first diffraction grating passes light energy over a portion of the specimen surface extending at least from a center of the specimen surface to an edge of the specimen surface.

11. The system of claim 1, wherein said system performs the scan of the portion of the specimen surface to assess at least one from a group comprising global planarization, erosion, and dishing.

12. The system of claim 1, wherein said specimen comprises a CMP processed wafer, and said specimen comprises one from the group including:

(a) unpatterned wafers with film;

(b) patterned test wafer with test mask;

(c) patterned production wafer with combination of product and test mask; and

(d) patterned production wafers free of test masks.

13. The system of claim 1, wherein said system is integrated into a CMP processed wafer production line.

14. The system of claim 1, wherein the camera has zoom capabilities.

15. The system of claim 14, further comprising at least one translation means from the following:

(a) wafer translation means;

(b) interferometer translation means; and

(c) imaging system translation means;

wherein the translation means reduce the field of view generated by the zoom capabilities of the camera.

~~16. A method for inspecting a portion of a surface of a specimen, comprising the steps of:~~

~~transmitting light energy toward said specimen;~~

~~diffracting said light energy into predetermined order light energy;~~

~~directing said diffracted light energy toward a predetermined portion of said specimen surface portion of said surface having predetermined standardized characteristics and simultaneously toward a reflective surface mounted substantially parallel to said specimen surface, wherein said predetermined portion comprises less than half of the specimen surface;~~

~~receiving predetermined order light energy reflected from said specimen and said reflective surface and combining the received light energy; and~~

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directing said light energy to a light receiving device.

17. The method of claim 16, wherein said predetermined order light energy comprises nonzero order light energy.

18 ~~16~~. The method of claim 17, wherein said diffracting step comprises diffracting for zero intensity of the zero order of the light energy received.

19 ~~17~~. The method of claim 16, further comprising the step of initially calibrating the system prior to said transmitting step.

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18. The method of claim 16, wherein said light energy forms an image, and said directing step comprises altering the image aspect ratio.

19. The method of claim 16, wherein said method provides light energy to a strip extending from at least a center of said specimen to an edge of said specimen.

20. The method of claim 16, wherein said method addresses and assesses at least one of the anomalies from a group comprising global planarization, erosion, and dishing.

21. The method of claim 16, wherein said method is integrated into a CMP process line.

22. The method of claim 16, wherein said specimen comprises a CMP processed wafer, and said specimen comprises one from the group including:

(a) unpatterned wafers with film;

(b) patterned test wafer with test mask;

(c) patterned production wafer with combination of product and test mask; and

(d) patterned production wafers free of test masks.

23. The method of claim 16, wherein said light receiving device comprises a camera having zoom capabilities.

24. The method of claim 24, further comprising translating components to provide a reduced field of view when using the camera zoom capabilities.

25. A method for inspecting a surface of a specimen, said surface having a surface area, comprising:

disposing a swath of nonzero order light energy having approximate predetermined dimension across said surface of said specimen while simultaneously transmitting predetermined order light energy toward a reflective surface, said swath covering less than approximately half of the surface area of the specimen; and

combining light energy received from said surface and said reflective surface;

wherein said disposing step comprises disposing light energy to a portion of said surface having predetermined standardized characteristics.

26. The method of claim 23, wherein said predetermined order light energy comprises nonzero order light energy.

27. The method of claim 23, further comprising collimating light energy prior to said disposing step.

28. The method of claim 24, further comprising diffracting light energy transmitted from said collimating step and passing diffracted nonzero order light energy toward said specimen.

29. The method of claim 26, further comprising diffracting and collimating light received from said combining step.

30. The method of claim 27, further comprising blocking passage of zero order light energy received from said diffracting step.

31. The method of claim 23, further comprising converting an image of said portion of said specimen into an image having an aspect ratio closer to 1:1.

32. The method of claim 24, wherein said collimating step employs at least one lens.

33. The method of claim 24, wherein said diffracting step is optimized for zero intensity of the zero order of the light energy.

34. The method of claim 23, wherein said method provides light energy to a strip extending from at least a center of said specimen to an edge of said specimen.

35. The method of claim 23, wherein said method addresses and assesses at least one of the anomalies from a group comprising global planarization, erosion, and dishing.

36. The method of claim 23, wherein said method is integrated into a CMP process line.

37. The method of claim 23, wherein said specimen comprises a CMP processed wafer, and said specimen comprises one from the group including:

(a) unpatterned wafers with film;

(b) patterned test wafer with test mask;

(c) patterned production wafer with combination of product and test mask; and

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(d) patterned production wafers free of test masks.